ISSN No:-2456-2165

System Bulid and Simulation of Fitness Center Management in Middle East

* Sheikh abobakr salem alkaff[1], and Cahyo Darujati[2].
[1]Student, Narotama University, Informatic Engineering, Surabaya, Indonesia.
[2]Superviser, Narotama University, Informatic Engineering, Surabaya, Indonesia.

Abstract:- Any gym or fitness center that does not have a website or web application is missing out on one of the most potent marketing tools available. The major reason that businesses should have a website is to boost their chances of obtaining new clients. Most individuals nowadays utilize the internet to locate what they need, such as researching products or businesses before making a decision. As a consequence, we will develop a web application to assist the fitness center owner in managing their business. On a regular basis, the owner maintains records in MS Excel or logbooks. This strategy is beneficial, but it might result in a lot of data redundancy and a larger probability of mistakes.

Making a system for operating a fitness facility can get rid of most software restrictions, improve productivity and accuracy, and offer a user-friendly interface. Additionally, this project's construction will increase communication capacity while lowering costs and maintaining the infrastructure.

I. INTRODATION

A business known as a fitness center leases out exercise gear or areas intended for physical fitness and health in return for money. The fitness center's numerous exercise sessions and activities are also available to members. At the moment, every management work at a fitness club is done by hand. Records are kept by writing on paper forms. The financial system for the secretary accountant and their auditors is maybe the only computerized component of the management system. This might make keeping track of the records confusing and result in repetitive chores. Administrative chores appear to need to be reduced as the number of memberships and exercise programs increases. In addition, operations are still as difficult regardless of the size of the gym. As a result, fitness center solutions are frequently constructed to order in order to satisfy their unique needs. The fact that fitness management systems save carbon emissions is an additional advantage.

These solutions have shortened the processing time for each activity while increasing the effectiveness of the booking and administration operations. Thanks to an online management system, gyms and fitness facilities may now interact online with both potential customers and current ones. The quickest and most convenient way to communicate with consumers is through an online management system.

The time needed to complete each action has been reduced while the booking and administration procedures have become more efficient thanks to these solutions. Thanks to an online management system, gyms and fitness facilities may now engage with potential customers and existing patrons online. The quickest and easiest method to engage with clients is through an online management system.

One gym still uses a manual fitness center administration system, taking walk-ins, phone calls, and even putting names in social media (WhatsApp groups). These were the only problems some centers experienced as a result of the absence of procedures for managing and booking the center. They now employ a manual management system that requires a complex and thorough approach because it is based on paper and social application. Furthermore, using this conventional approach, they were unable to completely monitor all activities in the exercise facility. Inconvenient for both members and instructors, separate registration for scheduling lessons, for instance, might lead to data duplication and wasted time. Last but not least, the inefficiency of this method causes the center to lose money because some people can cancel at the last minute without paying for the session.

II. METHODOLOGY

In order to complete and succeed a project while still meeting the demands of the user, methodology is crucial. The project's development will likewise employ this strategy. Every step that will be employed in the technique is important and should not be skipped.

In order to guarantee that the entire project is moving in the right direction toward the goals outlined in Chapter 1, the process of the entire project must first be adequately sketched out or mapped in an orderly manner. The approach for this complete project will also comprise the introduction of the project's title, goals, flowcharts, and anticipated timeline.

- *System Development Life Cycle (SDLC)*

The fundamental used throughout this project is based on the System Development Life Cycle (SDLC), which consists of several stages such as requirement analysis, design, and development. This chapter will go over the requirement analysis and design phases in greater detail. By implementing proper methodology, a high-quality product that meets all of the user's requirements can be produced.

ISSN No:-2456-2165

➢ *Requirement Analysis*

During the requirement phase, all of the critical elements required to create a project are defined. This includes the project's objective, problem statement, project scope, and expected outcome. Furthermore, the normal process of booking a class session has been observed.

Based on the observations, the center's administrator should schedule sessions for a specific group of people on a specific date. Aside from that, the medium used to recruit members for the class was a social media application. Such a practice is inconvenient because if no responses are received, the class will not be fully booked, but they will still need to open the class for those who booked the class in advance. Moreover, if the class is not full, the center staff will be unable to optimize the use of the equipment. In addition, the literature review is covered in this phase. Some of the existing system has been reviewed, and data has been gathered in order to compare the features of the existing system and the proposed system. As a result, any improvement can be incorporated into the proposed system.

III. DESIGN

The two sub-sections of the design process are the creation of the system's storyboard and the use of diagrams to generate system features. Through the use of diagrams like Use Case Diagrams, Context Diagrams, Data Flow Diagrams, Sequence Diagrams, Activity Diagrams, and Entity Relationship Diagrams, the first segment focuses on establishing system features and operational functions. The second section will concentrate on a low-fidelity prototype or storyboard of web-based management to provide a better understanding of the proposed system

A. Use Case Diagram

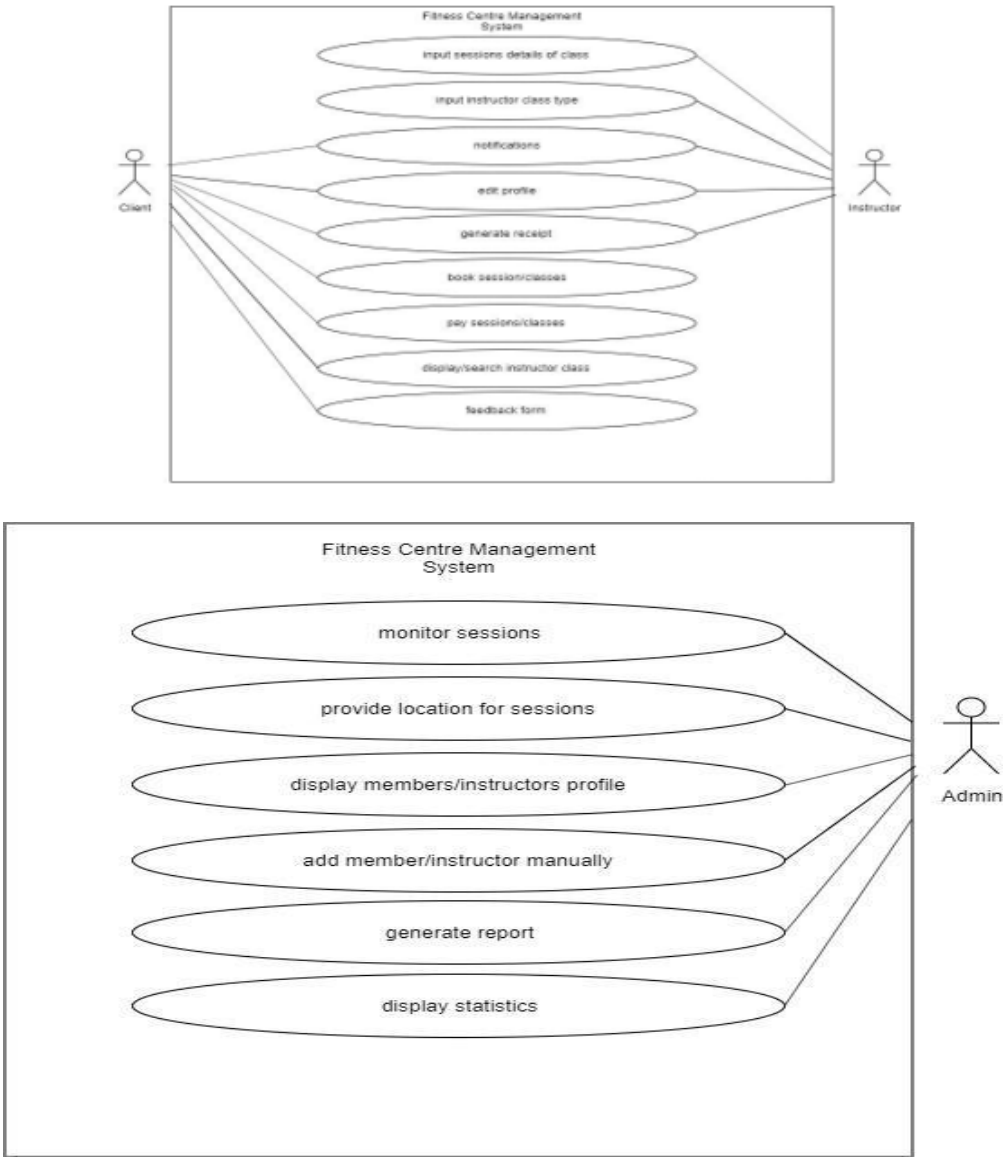

Fig 1:- Use Case Diagram

ISSN No:-2456-2165

B. System Prototype (Storyboard)

Fig 2:- Homepage

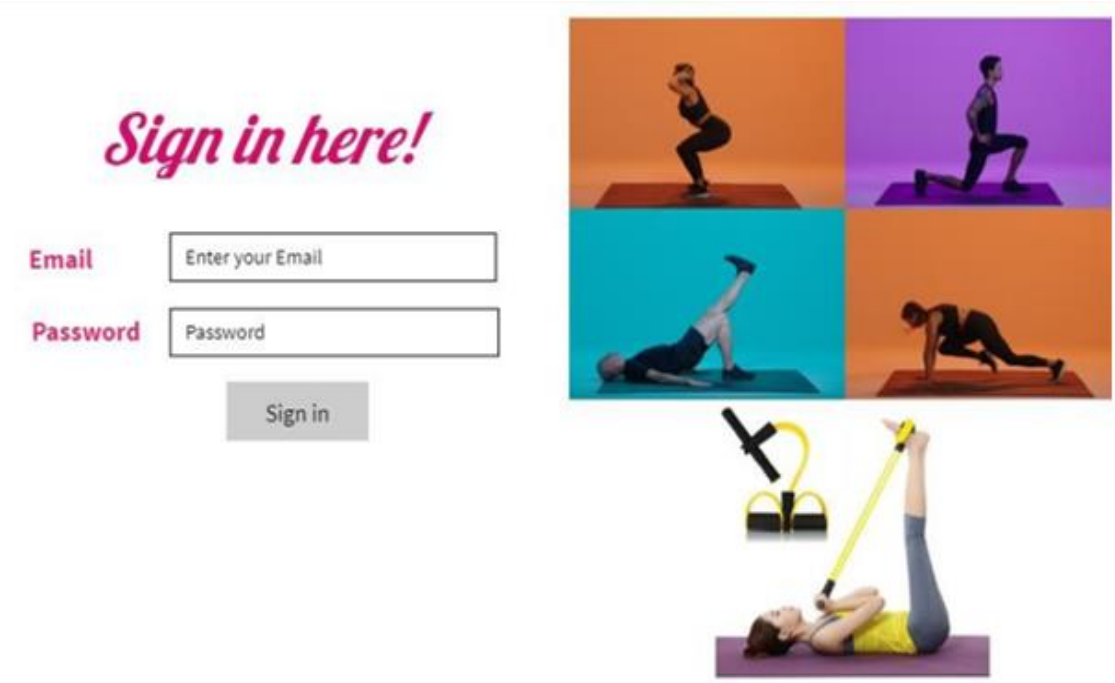

Fig 3:- Sign In Page for Members and Instructors

Fig 4:- Sign Up Page for Members and Instructors

IV. SYSTEM DEVELOPMENT

Several tools were utilized in establishing Fitness Center Management System to automate the manual booking system within the center. These are the tools used for the software and hardware component:

1) Asus A456U Series Core i5 Laptop
2) Sublime Text 3
3) Notepad++
4) Google Chrome/ Mozilla Firefox/ Internet Explorer 8
5) XAMPP Control
6) PHP and MySQL
7) Infinity.com - free webhosting site

V. CONCLUSION

As a result, the problem statement's problems have all been resolved and the present business process has been enhanced by the Online fitness center Booking System. the Online fitness center Booking System is still in its infancy. The change was made in order to make the booking process easier for the stakeholders. The OGBS proposal was motivated by issues with the cumbersome manual booking procedure seen in the present business process. The evaluation's findings have given us good reason to believe that the booking system will soon be improved.

REFERENCES

[1]. Hasan, Syed.(2014). Documentation Of Online Booking System.10.13140/Rg.2.1.2545.4160.
[2]. S, Mohamed. (2012). Software Development Life Cycle Models and Methodologies. Retrieved from https://melsatar.blog/2012/03/15/software-development-life-cycle- models-and-methodologies/
[3]. What are Automated System Operations (ASO)? - Definition from Techopedia. (n.d.). Retrieved from https://www.techopedia.com/definition/31065/automated-system- operations-aso.